Installation

We implement all the MSF systems with PyTorch 1.8.0 and Python 3.7.11. All experiments are conducted on a server with an Intel i7-10700K CPU (3.80 GHz), 48 GB RAM, and an NVIDIA GeForce RTX 3070 GPU (8 GB VRAM).

Corruption Patterns Dependency

Run the following command to install the dependencies

```
cd Corruption
pip install -r requirements.txt
```

If you need to synthesize rain and fog, you need to install the following dependencies For synthesize realistic images of rain and fog, you need to install the dependencies in this repository. link

- optional : git clone the repository and move to AI-MSF-Benchmark/corruption/3rd_parts/camera/
- Install dependencies
- generate depth maps
- download particles simulation files
- construct datasets to the required format.

```
corruption/3rd_parts/camera/data/source/kitti/data_object/training/image_2/file0001.png
      # Source images (color, 8 bits)
corruption/3rd_parts/camera/data/source/kitti/data_object/training/image_2/depth/file0001.p
ng     # Depth images (16 bits, with depth_in_meter = depth/256.)
corruption/3rd_parts/camera/data/source/particles/kitti/data_object/rain/10mm/*.xml
      # Particles simulation files (here, 10mm/hr rain)
```

For synthesize realistic point cloud of rain and fog, you need to install the dependencies in this repository. link

- optional : git clone the repository and move to AI-MSF-Benchmark/corruption/3rd_parts/lidar/
- Install dependencies

Install MSF-based Systems

In order to reproduce our experiments, we need to carefully configure the environment for each system. The details are here